

ABSTRACT OF THE DISCLOSURE

In a communications system such as a wireless code division multiple access (CDMA) communications system, an interference-compensated information symbol is generated from a source information symbol based on knowledge of an information symbol and a first code used to generate a first coded signal. The first coded signal and a second coded signal representing the interference-compensated information symbol encoded according to a second code are then concurrently transmitted. In one embodiment, a composite signal is generated from at least one information symbol according to at least one code from a first group of codes of a set of quasi-orthogonal codes. An interference-compensated information symbol is then generated from a source information symbol, the composite signal and a code from a second group of codes of the set of quasi-orthogonal codes. The second coded signal represents the interference-compensated information symbol encoded according to the code from the second group, and is transmitted concurrently with transmission of the first coded signal. Preferably, the interference-compensated information symbol is generated by integrating a product of the composite signal and the complex conjugate of the code from the second group over a symbol interval, scaling the integrated product by a scaling factor, and subtracting the scaled integrated product from the source information symbol to generate the interference-compensated information symbol.